

# West Virginia Conservation Covers for Wildlife and Pollinators

Species	Seeding Rate (% of mix; # seeds/lb) <sup>a</sup>	Max. Height (feet)	Bloom Period <sup>b</sup>		Minimum Light	Flower Color	Min. Soil Moisture Requirements
<b>Grasses</b>							
Little bluestem ( <i>Schizachyrium scoparium</i> )	10-30% mix; 200K/lb	2-3'	July – Oct	<b>M</b>	Full – Part Sun	Purple	Low
Big bluestem ( <i>Andropogon gerardii</i> )	5-10% mix; 144K /lb	5-7'	Aug – Oct	<b>L</b>	Full – Part Sun	Yellow	Low to Moderate
Indiangrass ( <i>Sorghastrum nutans</i> )	10-30% mix; 175K/lb	6'	Aug – Oct	<b>L</b>	Full – Part Sun	Red-yellow	Low to Moderate
Eastern gamagrass ( <i>Tripsacum dacyloides</i> )	10-40% mix; 7K/lb	10'	June	<b>E</b>	Full – Part Sun	Straw	Moderate to High
Broomsedge ( <i>Andropogon virginicus</i> )	5-25% mix; 800K/lb	1.5-3'	Aug – Oct	<b>L</b>	Full – Part Sun	Straw	Low to High
Switchgrass ( <i>Panicum virgatum</i> )	10-20% mix; 250K/lb	4-6'	July – Sept	<b>M</b>	Full – Part Sun	Straw	Low to High
Sideoats Grama ( <i>Bouteloua curtipendula</i> )	5-25% mix; 159K/lb	2'	July – Sept	<b>M</b>	Full Sun	Straw	Low
<b>Wildflowers</b>							
Appalachian Beard Tongue ( <i>Penstemon laevigatus</i> )	1-5% mix	4'	May – June	<b>E</b>	Shade to Full Sun	Violet	Moderate
Black-eyed Susan ( <i>Rudbeckia hirta</i> )	2-10% mix; 1.5M/lb	1-3'	June – Oct	<b>E</b>	Full – Part Sun	Yellow	Low to Moderate
Bee Balm ( <i>Monarda didyma</i> )	1-5%	2-4'	June – Aug	<b>E</b>	Full Sun	Scarlet	Moderate
Blazing Star ( <i>Liatri spicata</i> )	2-10% mix; 100K/lb	1-5'	July – Sept	<b>M</b>	Full – Part Sun	Pink-purple	Moderate
Blue Vervain ( <i>Verbena hastate</i> )	2-10% mix; 1.5M/lb	2-5'	June – Oct	<b>M</b>	Full – Part Sun	Violet	Moderate to High
Boneset ( <i>Eupatorium perfoliatum</i> )	2-10% mix; 2.8M/lb	5'	July – Oct	<b>M</b>	Full – Part Sun	White	Moderate to High
Butterflyweed ( <i>Asclepias tuberosa</i> )	3-15% mix; 70K/lb	1-3'	June – Aug	<b>E</b>	Full Sun	Orange	Low
Cardinal Flower ( <i>Lobelia cardinalis</i> )	1-5% mix; 11.3M/lb	2-6'	July – Oct	<b>M</b>	Full – Part Sun	Red	High
Eastern Rosemallow ( <i>Hibiscus moscheutos</i> )	1-5% mix; 200K/lb	6'	June – Sept	<b>M</b>	Full Sun	White	High
Fall Phlox ( <i>Phlox paniculata</i> )	1-5% mix	1.5-6'	July – Oct	<b>M</b>	Full – Part Sun	Pink-Purple	Moderate
Great Blue Lobelia ( <i>Lobelia siphilitica</i> )	1-2% mix; 7.7M/lb	1-5'	Aug – Sept	<b>L</b>	Full – Part Shade	Blue	High
Heart-leaved Aster ( <i>Aster cordifolius</i> )	2-10% mix; 2M/lb	2-3'	Aug – Sept	<b>L</b>	Full – Part Sun	Blue-purple	Moderate
Hoary Mountain Mint ( <i>Pycnanthemum incanum</i> )	1-2% mix	3'	July to Sept	<b>M</b>	Shade	White	Low
Heath Aster ( <i>Aster pilosus</i> )	2-10% mix; 700K/lb	2-5'	Oct - Nov	<b>L</b>	Full Sun	Pale Purple	Low
Joe-Pye Weed ( <i>Eupatorium fistulosum</i> )	2-10% mix; 1.4M/lb	7'	July – Sept	<b>M</b>	Full – Part Sun	Pink-Purple	Moderate
Milkweed ( <i>Asclepias syriaca</i> )	5-15% mix; 70K/lb	4'	June – Aug	<b>E</b>	Full Sun	Purple	Low
Mistflower ( <i>Eupatorium coelestinum</i> )	1-2% mix; 1.5M/lb	1-3'	July – Oct	<b>M</b>	Shade – Full Sun	Purple	Moderate
Monkey Flower ( <i>Mimulus ringens</i> )	1-5% mix; 22.9M/lb	2-4'	June – Sept	<b>E</b>	Full Sun	Purple- White	High
Narrow-leaved Sunflower ( <i>Helianthus angustifolius</i> )	2-10% mix; 500K/lb	1.5-5'	Aug – Oct	<b>L</b>	Full – Part Sun	Yellow	Moderate to High
New England Aster ( <i>Aster novae-angliae</i> )	2-10% mix; 1.1M/lb	2-6'	Aug – Sept	<b>L</b>	Full – Part Sun	Purple	Low to Moderate
New York Ironweed ( <i>Vernonia noveboracensis</i> )	1-5% mix; 300K/lb	3-7'	July – Sept	<b>M</b>	Full – Part Sun	Purple	High
New York Aster ( <i>Aster novi-belgii</i> )	1-10% mix; 700K/lb	5'	July – Oct	<b>M</b>	Full – Part Sun	Violet	Moderate

Ox Eye Sunflower ( <i>Heliopsis helianthoides</i> )	2-10% mix; 102K/lb	4'	July – Aug	<b>L</b>	Full – Part Sun	Pale Yellow	Low to Moderate
Rough Goldenrod ( <i>Solidago rugosa</i> )	1-5% mix; 1M/lb	1-3.5'	Aug – Oct	<b>L</b>	Full – Part Sun	Yellow	Moderate
Showy Goldenrod ( <i>Solidago speciosa</i> )	1-5% mix; 1.3M/lb	4'	Sept – Oct	<b>L</b>	Full – Part sun	Yellow	Moderate
Showy Tick Trefoil ( <i>Desmodium canadense</i> )	2-10% mix; 80K/lb	2-4'	July – Aug	<b>M</b>	Full Shade	Pink-Violet	Low
Spotted Joe-Pye Weed ( <i>Eupatorium Maculatum</i> )	2-10% mix; 1/4M/lb	5'	July – Sept	<b>M</b>	Full Sun	Pink-Purple	High
Smooth Blue Aster ( <i>Aster laevis</i> )	1-10% mix; 1M/lb	1-4'	Aug – Oct	<b>L</b>	Full Sun	Blue-Violet	Low
Sneezeweed ( <i>Helenium autumnale</i> )	1-5% mix; 1.5M/lb	5'	Aug – Sept	<b>L</b>	Shade – Full Sun	Yellow	Moderate
Swamp Milkweed ( <i>Asclepias incarnate</i> )	5-15% mix; 70K/lb	6'	June – Aug	<b>E</b>	Full – Part Sun	Pale purple	High
Tall Coreopsis ( <i>Coreopsis tripteris</i> )	1-5% mix; 200K/lb	3'	July – Sept	<b>M</b>	Full – Part Sun	Yellow	Moderate
Tickseed ( <i>Coreopsis tinctoria</i> )	3-15% mix; 3.2M/lb	3'	July – Sept	<b>M</b>	Full – Part Sun	Yellow	Low
Virginia Mountainmint ( <i>Pycnanthemum virginianum</i> )	1-2% mix; 3.8M/lb	1-3'	July – Sept	<b>M</b>	Full Sun	White	Low
White Tuttlehead ( <i>Chelone glabra</i> )	1% mix; 1,472K/lb	2-7'	July – Sept	<b>L</b>	Full – Part Shade	White	High
Wild Bergamot ( <i>Monarda fistulosa</i> )	1-5% mix; 1.2M/lb	2-4'	June – Aug	<b>E</b>	Full – Part Sun	Lavender	Low to Moderate
Wild Blue Indigo ( <i>Baptisia australis</i> )	1-5% mix	3-5'	May – Aug	<b>E</b>	Full – Part Sun	Blue	Low
Wild Blue Lupine ( <i>Lupinus perennis</i> )	5-20% mix; 19L/lb	1-3'	May – June	<b>E</b>	Full – Part Sun	Pink-blue	Low
Wild Columbine ( <i>Aquilegia Canadensis</i> )	1-5%; 504K/lb	2'	April – June	<b>E</b>	Full – Part Shade	Red-yellow	Low to Moderate
Partridge Pea ( <i>Chamaecrista fasciculata</i> )	2-20% mix; 65K/lb	3'	July – Sept	<b>L</b>	Full Sun	Yellow	Low to Moderate

<sup>a</sup> K – 1,000; M – Million

<sup>b</sup> E=EARLY, M=MID, L=LATE flowering times.

## OPERATION AND MAINTENANCE

Monitoring and controlling weeds is very critical in the first and second years.

### First Year

Observation of the growth of weed competition is essential. When undesirable vegetation reaches 12”-18” tall, mow to no less than 6” high to prevent weeds from going to seed. Most native plants will grow deeper root systems than tops in the first year, and mowing 6-8” high will not hurt them.

## **Second Year**

Mow once, close to the ground, in early spring. Postponing mowing until early spring may provide winter cover for wildlife. Wildflowers may also be mowed for re-bloom in summer when drought/heat stress causes significant loss of color. This may be done when seeds have matured at a minimum of 3 weeks following bloom. Mowing high (four to six inches) and light fertilization may initiate re-bloom of several species in three to four weeks.

**Table 2.** This table contains several options for controlling competing, non-desirable vegetation during plant establishment. If two burn downs are planned, records should indicate that the herbicide was applied to the field twice. Eastern Gamagrass and some forbs/wildflowers may not be compatible with imazameth containing products (check label for compatibility). All herbicides shall be applied and used according to label recommendations and may slightly differ from that listed below.

Option #	Current Condition	Timing	Method
<b>1 Single Burn Down</b>	<b>Grassland</b>	<b>Spring</b>	<p>(This option should not be used when tall fescue or orchardgrass is the predominant cover. Two herbicide burndowns are recommended when fescue is the predominant cover.)</p> <ol style="list-style-type: none"><li>1. Remove excess vegetation in fall or winter. (Mowing or Grazing)</li><li>2. Apply tank mixture after vegetation has grown 4 to 6 inches.</li><li>3. Tank Mixture: per acre in April – June</li><li>4. Apply 1.5 quarts glyphosate base product. May be tanked mixed with a glyphosate/imazameth mixture at a rate of 10.7 oz/acre.</li><li>5. If imazameth alone is available, it can be applied instead of the glyphosate/imazameth mixture at a rate of 4-8 oz per acre. Follow all label instructions.</li></ol>
<b>2 Two Burn Downs</b>	<b>Grassland</b>	<b>Fall &amp; Spring</b>	<ol style="list-style-type: none"><li>1. Remove excess vegetation in late summer (Aug./Sept.). (Mowing or Grazing)</li><li>2. Apply tank mixture after vegetation has actively grown to 4 to 6 inches. <b>Tank Mixture: per acre in Sept./Oct.</b> 1 to 2 quarts glyphosate based product. Follow all label instructions. <b>AND</b></li><li>3. Apply tank mixture just prior to planting and after remaining vegetation grows 4 to 6 inches <b>Tank Mixture: per acre in April-June</b> Apply 1.5 quarts glyphosate based product. May be tank mixed with glyphosate/imazameth mixture at a rate of 10.7 oz/acre. If imazameth alone is available, it can be applied instead of the glyphosate/imazameth mixture at a rate of 4-8 oz per acre. Follow all label instructions.</li></ol>
<b>3 Two Burn Downs</b>	<b>Grassland</b>	<b>Spring &amp; Spring</b>	<ol style="list-style-type: none"><li>1. Remove excess vegetation in fall or winter (Mowing or Grazing)</li><li>2. Apply tank mixture after vegetation has actively grown 4 to 6 inches. <b>Tank mixture: per acre in April</b> 1 to 2 quarts glyphosate based product. <u>If green-up occurs two to four weeks after initial spraying:</u></li><li>3. Apply tank mixture just prior to planting and after remaining vegetation grows at least 4 to 6 inches. <b>Tank mixture: per acre in April-June</b> Apply 1.5 quarts glyphosate based product. May be tank mixed with glyphosate/imazameth mixture at a rate of 10.7 oz/acre. If imazameth alone is available, it can be applied instead of the glyphosate/imazameth mixture at a rate of 4-8 oz per acre. Follow all label instructions.</li></ol>